

Utility Patent Application

CONFIDENTIAL INFORMATION

5 Patent Application based on: Docket No. 03-1122

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ILLUMINATION MEANS FOR A CHAINSAW

RELATED APPLICATIONS

15 The present invention was first described in Disclosure Document
Registration 503,651 filed on January 11, 2002 under 35 U.S.C. §122, 37 C.F.R.
§1.14 and MPEP § 1706, and the present application claims the benefit of U.S.
Provisional Application Ser. No. 60/397,530, filed on July 23, 2002.

BACKGROUND OF THE INVENTION

1. Field of the Invention

20 The present invention relates generally to hand tools incorporating an
illumination means or device and, more particularly, to a chain saw having
25 integrated task lighting.

2. Description of the Related Art

Chainsaws have been used as wood cutters for decades, including use in trimming trees, cutting down trees and the like. The vast majority of time, chainsaws are operated during the day. However, some chainsaws are operated at night. Most of this operation is under emergency conditions as a result of downed trees and major limbs as a result of a storm. There may be damage to homes, other structures, power lines, blocked roads and the like that must be corrected quickly. Often emergency crews use their vehicle headlights to light the work area, but this method is not always possible or successful and may compromise safety. Other times require a second person to hold a flashlight, but this method is obviously not an efficient use of manpower and results in longer clean up times. Accordingly, there is a need for a means by which chainsaws operated during nighttime hours under emergency situations can be provided with an adequate and safe light source.

A search of the prior art did not disclose any patents that read directly on the claims of the instant invention; however, the following references were considered related.

U.S. Patent No **4,283,757**, issued in the name of *Nalbandian et al.*, discloses an illuminated screw driver or hand tool with at least one light bulb for focus toward an intended work area;

U.S. Patent No **4,302,797**, issued in the name of *Cooper*, discloses a

hand tool with its own source of illumination;

U.S. Patent No **5,515,249**, issued in the name of *Shiao*, discloses a hand tool set for holding tools and attachment bits, wherein the tool includes a lamp assembly for illumination;

5 U.S. Patent No **6,186,638**, issued in the name of *Chang*, discloses a hand tool having a pivotally adjusted flashlight disposed at one end;

U.S. Patent No **6,203,165**, issued in the name of *Chen*, discloses a tool combination with an illumination device;

10 U.S. Patent No **D 450,557**, issued in the name of *McCalla et al.*, discloses an ornamental design for a lighted knife handle; and

U.S. Patent No **D 452,129**, issued in the name of *McCalla et al.*, discloses an ornamental design for a lighted knife handle.

Consequently, there exists a continuous need for new ideas and enhancements for existing products in the tool illumination industry.

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SUMMARY OF THE INVENTION

It is therefore an object of the present invention to provide a chainsaw with illumination means for providing light during operation when lighting is poor.

20 It is a feature of the present invention to provide an illumination means for a chainsaw that focuses a generated beam of light onto the bar and chain of a chainsaw, thereby increasing the safety of use in poor lighting.

It is a further feature of the present invention to provide an illumination means for a chainsaw that is integrally incorporated into the front of the housing and actuated by a switch operatively and electrically connected therebetween.

It is yet a further feature of the present invention to provide an illumination means for a chainsaw that is positioned at the front of the housing within a pivotal shell, the shell pivotal for providing adjustment and versatility to illumination means and allowing illumination means to operate independently as a light source along a darkened path.

Briefly described according to one embodiment of the present invention, an illumination means for a chainsaw is a light source generated for providing a focused beam at the bar and chain of a chainsaw. Illumination means is positioned at the front of the housing of a chainsaw. Illumination means may be integrally incorporated therein or placed onto the exterior of the housing, and may also include a pivotal shell for adjusting the projection of the light beam. Illumination means is operatively and electrically coupled to a switch that actuates generation of light.

BRIEF DESCRIPTION OF THE DRAWINGS

The advantages and features of the present invention will become better understood with reference to the following more detailed description and claims taken in conjunction with the accompanying drawings, in which like elements are identified with like symbols, and in which:

FIG. 1 is a side view of a commercially available chainsaw **1**, constituting what is perceived to be PRIOR ART;

FIG. 2 is a side view of **FIG. 1** with illumination means **10** placed at the front of housing **2**; and

FIG. 3 is a side view of an alternate embodiment of illumination means **10** placed within a pivotal shell **12** and having a rotatable rim **14**, and a switch **16**.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

The best mode for carrying out the invention is presented in terms of its preferred embodiment, herein depicted within Figures 1 through 3.

1. Detailed Description of the Figures

Referring now to **FIG. 1**, the prior art is depicted as a commercially available chainsaw **1** comprising an engine housing **2** with a bar **3** and cutting chain **4** outwardly projected therefrom. The housing **2** is generally manufactured from a durable plastic hardened shell intended to withstand repeated usage and physical abuse associated with wood cutting. The housing **2** includes a rear

handle **5** for placement of a user's hand to engage the throttle trigger **6**.

Opposite to the rear handle **5** is a front handle **7** that traverses the lateral sides of the housing **2** and provides for placement of a user's second hand for use in steadying and controlling the chainsaw **1** during operation. Finally, a front hand guard **8** is placed at the anterior end of the housing **2**, between the front handle **7** and the bar **3** and cutting chain **4**. The front hand guard **8** operates to protect the user's hand from exposure to the bar **3** and chain **4** during operation, thereby preventing or reducing the incidents of dismemberment or severing of digits or limbs.

Referring now to **FIG. 2** and **FIG. 3**, illumination means **10** incorporated for use with a chainsaw **1** is shown in a preferred embodiment of the present invention. Illumination means **10** is envisioned as being available in an after-market add-on component or as integrated into the chainsaw **1** during manufacture. Illumination means **10** may be manufactured from a variety of materials, including halogen bulbs, quartz halogen bulbs, halogen/xenon bulbs, and other similarly fabricated bulbs known in the art. It is intended that illumination means **10** is manufactured from materials that are suitable for sustaining focused beams of light for several hours without fail.

In one embodiment of the present invention, illumination means **10** is positioned at the front of the housing **2** adjacent to the front handle **7** and front handle guard **8** so that a focused beam of light is generated and projected at the

bar **3** and chain **4** during operation. It is envisioned that illumination means **10** may have a variety of geometric configurations, including orthogonal, circular or oval, and regardless of geometric configuration, illumination means **10** is positioned so that approximately one-half of the generated light is projected to one lateral side of the bar **3** and chain **4** and one-half of the generated light is projected to the opposite lateral side of the bar **3** and chain **4**, providing a more evenly distributed beam of light for operation.

In another embodiment of the present invention, as depicted in **FIG. 3**, illumination means **10** is housed in a pivotal shell **12**. The shell **12** is positioned to the exterior of the housing **2**, projecting either from the front of the housing **2** or from the top of the housing **2** near the front hand guard **8**. The shell **12** is pivotal so as to provide the user the ability to adjust the shell **12** and illumination means **10** if dictated by circumstance. The shell **12** is pivotal laterally and longitudinally. It is further envisioned that the pivotal feature of the shell **12** also allows the user to adjust the shell **12** to operate as a flashlight along a darkened path in between usage of the chainsaw **1** for cutting. For example, if a user must negotiate a darkened path in a wooded or covered area, the user would be able to actuate illumination means **10**, adjust the shell **12** and illuminate the desired pathway, if only for a brief time until reaching the area in which work is to be performed. It is further envisioned that the shell **12** may be provided with an annular rim **14** rotatable for adjusting the intensity of the light beam generated by

illumination means **10**, which may be especially advantageous if many hours of work are required but illumination means **10** has a life of less than the estimated hours, wherein the user could reduce the intensity in more well lighted areas and conserve and preserve the life of illumination means **10**.

5 Illumination means **10** may be powered by a battery source integrally incorporated into the chainsaw **1**. Illumination means **10** may also be powered from a battery source external to the chainsaw **1**, such as a battery source clipped to the belt of a user and with electrical connection provided therebetween. Illumination means **10** may also be powered by a generator that
10 relays electrical energy from the power and energy generated by the motor of the chainsaw **1**.

 Illumination means **10** is actuated by a switch **16**, which may be a sliding switch, a push-button switch, a toggle switch, or other similar suitable switch mechanisms. Illumination means **10** and switch **16** are operatively and
15 electrically coupled so that placement of switch **16** into an "on" position actuates generation of light from illumination means **10**, and placement of switch **16** into an "off" position terminates generation of light from illumination means **10**.

 Switch **16** may be placed in a variety of suitable positions along the chainsaw **1**, provided that the switch **16** does not unnecessarily endanger the user either
20 before, during or after operation of the chainsaw **1**. In one embodiment, the switch **16** is placed on the front handle **7** so as to provide easy access to the

user, but at a position that avoids accidental disengagement of illumination means 10. Other appropriate and envisioned locations for placement of switch 16 are along the lateral sides of housing 2 and/or near the rear handle 5.

2. Operation of the Preferred Embodiment

5 To use the present invention, in accordance with a preferred embodiment of the present invention, a user will slide or place switch 16 into the "on" position, thereby generating light from illumination means 10. The user will then operate the chainsaw 1 in the usual, and safe, manner, with the generated light from illumination means 10 focused on the bar 3 and chain 4, thereby illuminating the
10 area of work for the user in poorly lighted areas, including nighttime and/or during power outages and storms.

The foregoing descriptions of specific embodiments of the present invention have been presented for purposes of illustration and description and are not intended to be exhaustive or to limit the invention to the precise forms disclosed.

15 Many modifications and variations are possible in light of the above teaching.

The embodiments were chosen and described in order to best explain the principles of the invention and its practical application, to thereby enable others skilled in the art to best utilize the invention and various embodiments with various modifications as are suited to the particular use contemplated. It is
20 intended that the scope of the invention be defined by the Claims appended

hereto and their equivalents. Therefore, the scope of the invention is to be limited only by the following claims.

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